Baltic Cities

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EU Strategy for the Baltic Sea Region facilitates green growth, page 7

Make Solutions with Businesses!

During the last decade there has been not only much talk but also much action on sustainability and social responsibility among businesses. At the same time, the global business community has strengthened its involvement and made its voice better heard in international sustainable development processes. This is a very welcome and necessary development and one of its culmination points so far is the much debated concept of green growth, which was also an intellectual backbone of the Rio Summit in 2012. In the Baltic Sea Region, businesses have also been demonstrating good initiatives and commitment for improving the marine environment.

These contributions of businesses have been enabled and backed up by good mobilization of competence and knowledge resources. The Vision 2050 report by the World Business Council on Sustainable Development (WBCSD) is a good example of this and provides an example to any stakeholder group or think-tank on a well-founded systematic analysis leading to comprehensive recommendations for action.

As Humankind is moving to cities – to work, live and do business there – it follows that both business opportunities and global sustainability challenges focus on cities ever more. Urbanization means great challenges for planning and construction as well as transport and services. If these challenges are well met, we have great possibilities to create sustainable cities and reduce carbon emissions. This challenge can and should be turned into a joint venture of cities and businesses. When this venture will be a successful one, there will be only winners at the table and round it.

What could such a venture mean in practice? During the last three years I have had the pleasure to cooperate with leading global businesses on urban sustainability. In 2010-2011 the city of Turku was chosen as the first pilot city for the Urban Infrastructure Initiative of the World Business Council on Sustainable Development. This global project experimented with new methods to build city development strategies utilizing early engagement and co-creation between cities and companies. During the project, experts from six global infrastructure and mobility companies evaluated together with our own experts and managers the infrastructure challenges of Turku and recommended solutions that were then assessed in cooperation. As an outcome, we have a wealth of proposed solutions in the fields of energy and mobility, and many of these solutions are now moving towards implementation.

Building on this successful project, we then started a three-year strategic development partnership with Siemens in order to jointly study and elaborate some fields of work further. For us this has been an exciting opportunity to learn from the World's leading urban infrastructure specialist on the company side and for our partners it has been a useful chance to test their approaches and learn from a mid-sized European city. Everybody involved found these processes to serve them well and bring added value both to city and business development. Sustainable cities are a good business indeed!

In order to be able to share from our lessons learnt throughout the Baltic Sea region, both Turku and Siemens are now contributing to the CBSS/Baltic 21-endorsed Baltic Urban Forum for Smart Cities initiative, which has been jointly created by the UBC and BDF. I warmly encourage all Baltic cities to join this new regional city-business knowledge alliance for sustainable development.

Risto Veivo

Senior Advisor, Climate and Environment Policy
City of Turku

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UBC cities are taking steps towards more sustainable region

Text: **Björn Grönholm and Terhi Luukkainen** Photos: **Shutterstock.com / katatonia82 and tridland**

Over half of the people in the world live in cities or near cities today and the share is constantly growing. Therefore cities have an important role in reducing negative environmental impacts and making the growth more sustainable.

Sustainable growth is a key priority for the EU under the Europe 2020 Strategy. The green and cleantech business is already one of the fastest growing business sectors globally. "Green sector" is a big employer within several subsectors like recycling and waste management, water and waste water management, air emission monitoring etc. The local sector, municipalities and cities have an important role in fulfilling the EU 2020 targets and are a natural innovator and operator for green growth. Cities and towns in cooperation with citizens and private sector are in a central position to identify, demonstrate and introduce new green technologies, to plan and present new efficient and sustainable solutions focusing on low carbon and to protect the environment. These are all identified in the Europe 2020 Strategy priorities as well as in the EU Strategy for the Baltic Sea Region.

UBC Commission on Environment spurs the cities in their sustainability work

This number of UBC Environmental Bulletin focuses on new steps towards a sustainable Baltic Sea Region. UBC has been operating for more than 20 years and it has been a successful and efficient actor in the development and integration of the Baltic Sea Region. The development of our region works as a model for several other regions globally and many of our member cities are well known forerunners. In this Bulletin we can present activities from our member cities that are important steps in building a more sustainable Baltic Sea Region. Among the articles you can find cases of new modern and sustainable technical solutions, rebuilding or modernizing the cities and cases of increased awareness important for making the right decisions in our cities. The need for cooperation between cities in environmental issues is also brought up. Our task is to support these processes, work together and even more bring up the good practices on the agenda.

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UBC EnvCom meeting highlighted the need for new openings

Text: **Björn Grönholm and Terhi Luukkainen** Photo: **Pekka Salminen**

The work of the UBC EnvCom and cooperation partners has been successful during the last years. However, the change in the region and in the UBC demands new kinds of working methods.

In connection with the UBC General Conference, the EnvCom organized a commission meeting together with the Commission on Energy. In his opening words Head of Secretariat Björn Grönholm told that the UBC EnvCom is coordinating the UBC Sustainability Action Programme 2010-2015 together with other UBC Commissions. EnvCom is currently working on themes like urban transport, climate change, maritime policies and sustainable maritime transport, efficient wastewater treatment and cooperation with Russian cities. These themes are common for many UBC cities and are also central challenges for the whole region. Therefore they are also highlighted in the EU Strategy for the Baltic Sea Region.

The Commission meeting included a workshop on Green Growth. Investments in greening a city in the cities of Malmö and Aarhus were presented as good examples. City of Rakvere is an example of a smart and green city in Estonia and the free public transport in City of Tallinn was presented as a way to motivate citizens to use public transport for saving emissions. City of Kaliningrad promoted regional energy solutions and the promotion of bioeconomy and cleantech.

Both large projects and smaller consultations are needed

The work of the UBC EnvCom and cooperation partners has been successful during the last years. A big number of projects have been implemented. Results such as less problem cases in the HELCOM "Hot spots" list are partly because of UBC cooperation projects. New partnerships have also been established and the integration of the region is proceeding strongly.

In the discussions it was mentioned that not only large scale projects can support the UBC cities but there is a need for several smaller tailor-made projects and consultations. In the General Conference the UBC organization took a step towards the new direction as the discussion of UBC structure with fewer commissions started.

New challenges demand new approaches

During the last year, when planning for the upcoming actions, it has been stated several times that our whole region as well as many of our actors such as UBC is in crossroads. The change concerns both cooperation and activities and it causes concrete challenges on the regional and local levels. The previously mentioned EU level strategies take concrete form in the next EU funding period with partly new priorities. Also this causes a lot of challenges to the region and cities.

After more than 20 years of successful cooperation we are also facing a challenge in involvement of new persons into the activities. For the moment there is a kind of a "change of generation" going on both in the UBC, in the UBC cities, and in the whole region. Taking the new active persons onboard is extremely important, but we also need to find a way of using the old experts that have been involved in building our region during the last 20 years.

Today there is a clear need for new ideas, new approaches and activities and new type of consortiums to push the development further.

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New co-chairs come from Malmö, Liepaja and Turku

Text: **Björn Grönholm and Terhi Luukkainen**

The long term co-chair of Environmental Commission, Mikko Jokinen has retired. The commission meeting decided to return to the original model of three co-chairs.

Mr Mikko Jokinen has been the co-chairman of UBC EnvCom since the establishment of UBC in 1991. Mr Jokinen informed prior to the commission meeting in October that he will resign due to retiring during the next working period. The UBC EnvCom tries to fill the loss of Mr Jokinen by bringing back the original model of three co-chairs. The new appointed co-chairs are Mr Trevor Graham from the city of Malmö, Ms Dace Liepniece from the city of Liepaja and Mr Risto Veivo from the city of Turku. Since the commission meeting, Trevor Graham has moved from his position in the city of Malmö and his colleague, Mr Per-Arne Nilsson has taken over the role of EnvCom co-chair.

All new co-chairs are experienced in UBC and international cooperation

Dace Liepniece is the Head of Environment and Health Department of the city of Liepaja. She has a broad expertise in building up a modern environmental administration. Dace has already functioned as a co- chair for the last two years. Risto Veivo works as Development Manager at the Climate, Environment Policy and Sustainable Development of City Group in the city of Turku. Veivo is the previous Head of the UBC EnvCom from year 1998 to 2006 and he also has a broad international experience in sustainability work on both city and Baltic Sea Region level. Per-Arne Nilsson is the Manager of the Environmental Management Department, city development and climate in the city of Malmö. All three co-chairs are experienced in UBC and international cooperation in the Baltic Sea Region and Europe. The co-chairs together with the staff of the Secretariat will take on the upcoming tasks of planning the next year's activities and to plan the next UBC Sustainability Action Programme 2016 – 2020, together with different events.

The next joint UBC Commission meeting will take place in Örebro, Sweden in 18th - 21th of May 2014.

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From left to right: Per-Arne Nilsson, Risto Veivo, Dace Liepniece

The EU Strategy for the Baltic Sea Region – building bridges to facilitate green growth and enable the transition towards low carbon societies

Text: **Krista Kampus** Photo: **Shutterstock.com / Devteev**

Sustainable development is a macro-regional challenge and vital for this development is to build bridges between key stakeholders at all levels of the BSR governance, especially with local governments across the region. One of the priorities of the overarching European Union Strategy for the Baltic Sea Region (EUSBSR) is to facilitate sustainable development within the region.

The Baltic 21 Unit of the Council of the Baltic Sea States (CBSS), in its role as Horizontal Action leader for sustainable development has adopted a holistic approach to facilitate this development, acknowledging the importance of the concept as a cross-cutting objective, as displayed and emphasized at the 4th EUSBSR Annual Forum in Vilnius, Lithuania.

Local governments play a key role

Low carbon societies and green economy are policy goals for both the EU and the EUSBSR in order to tackle various challenges, such as climate change mitigation and adaptation, energy supply and sustainable use of resources. Without the active involvement of local governments in these processes the goals will not be reached. Local governments can function as drivers and testing fields for development and application of green technologies, solutions for enabling energy and resource efficiency on a broader scale. They can create new innovative services which foster not only the local and sub-regional green economy but also generate new employment opportunities and investment potential.

Concrete action via projects

In the role of Horizontal Action Sustainable Development, Baltic 21 Unit at CBSS facilitates concrete action via a multitude of projects. Green economy and actions towards becoming low carbon societies are promoted on various levels of governance, including the sub-regional and local level, with the involvement of local stakeholders in projects such as the project "Baltic Green Public Procurement". Local governments are key players when it comes to active application of green public procurement, due to their role as main procurers having a purchasing power of 2000 Billion EUR in Europe per year. The project has developed an e-learning tool and utilized case studies.

Another vital example of local and city cooperation in sustainable development is the "Baltic Sea Region Urban Forum for Smart Cities"; a project managed by the Smart City Lab Tartu. This project is promoted by the UBC Board, the Baltic Development Forum and the city of Turku. The project will prepare a concept, which will play an important role in enabling urban areas in the Baltic Sea Region to move beyond "pockets of smartness" to becoming genuinely smart. Municipal and regional leaders and policy developers with an interest to contribute to smart cities technologies and concepts are invited to get engaged in the future project activities. More information is available at http://smartcitylab.eu/buf/

This project is directly linked to already existing networks like EFFECT, Baltic Metropolis Network, EUROCITIES and European Smart Cities as well as the flagship "Creating a network of sustainable cities and villages" in the EUSBSR Action Programme.

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Jēkabpils has its own natural oasis

Text: **Laura Afanasjeva** Photo: **City of Jēkabpils**

Surrounded by Jēkabpils forest park just at the city border lies Radži water reservoir. It was created in 1987 when the 158 hectares of used quarried were flooded. Now it is a top recreation area for inhabitants and guests of Jekabpils.

Radži water reservoir beach is one of the ten Blue flag beaches in Latvia. The Blue Flag is a certification by the Foundation for Environmental Education (FEE).

The Blue Flag criteria includes standards for water quality, safety, environmental education and information, the provision of services and general environmental management criteria. The Blue Flag is sought for beaches and marinas as an indication of their high environmental and quality standards.

The Blue flag has been raised at the Jēkabpils Radži water reservoir beach already for four years in a row. The status of the Blue flag beach has influenced many environmentally friendly initiatives in the surrounding area.

In summer 2013, the Municipality of Jēkabpils created a childrens' obstacle course in the park, and there is also a foot trail that consists of different types of stones, pinecones, wooden billets to stimulate feet nerve endings when walking on it. At the beach those who like to play domino can try to play it with the stones of more impressive size.

The infrastructure of the park has also been improved recently. In summer 2013, the main road that stretches along the park and leads to the Blue Flag beach was asphalted, and the creation of bicycle and pedestrian routes around the water basin is ongoing. Infrastructure will be improved within the frames of the project "Secure green area and water basins in Zemgale and Northern Lithuania (Urban Green)". The project is financed by Latvia–Lithuania Cross border Cooperation Programme 2007 – 2013.

Each spring and autumn there are public cleanups organized in the recreational area. Representatives of the City of Jēkabpils, individual persons, non-governmental organizations – they all take part in these actions to keep our natural oasis clean and prospering.

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A landfill in Kuressaare was turned into a recreational area

Text: **Liise Kallas** Photo: **City of Jēkabpils**

In September this year a former landfill of Kudjape in Saaremaa, close to Kuressaare, was opened as a recreational area spreading across four hectares of land.

The landfill that had been used for waste disposal from the beginning of 1970s until 2009 is now taking pride in its green slopes and winding jogging paths that can also be used for skiing and sledging in winter. Future development plans involve building an outdoor gym, viewing platform and a picnic area.

When Estonia joined the EU one of the agreements was to close all landfills that did not reach the safety criteria by July 2013. Landfills have previously been established without following any environmental requirements, and by producing landfill and greenhouse gases and causing toxification of waters, old landfills have become a huge threat to the environment.

The project of closing down the Kudjape landfill started in 2005. Four years later a new recycling and waste centre, where most of the county's waste is handled, was opened and the old landfill was finally ready to be closed for disposal.

Traditionally, closure operations of a landfill include gathering all the waste, covering it with a watertight layer and building collection systems for leachate and landfill gases. After this the area is closed for access for the coming 30 years as the threat to the environment cannot be excluded.

In Kudjape a more innovative approach was taken. Firstly, most of the waste in the landfill was sorted – hazardous waste and material for covering the area was extracted. In addition, the recovered materials were used for producing oil, fuel and plastic profiles, and some of it was used in Iru Waste to Energy facility on mainland Estonia. In total, 11 610 kg of waste was excavated.

By collaborating with researchers from Estonian University of Life Sciences and Linnaeus University (Sweden) the closing down of the Kudjape landfill became an international science project that cost almost 2 million euros. 89 % of it was financed by the EU Cohesion Fund through the state-owned foundation Environmental Investment Centre. The rest was covered by Saaremaa Landfill Ltd and its owner municipalities – City of Kuressaare and rural municipalities of Kaarma and Pihtla.

By closing down the Kudjape landfill and re-opening it as a public space, yet another chapter of waste management of Saaremaa has come to a sustainable end. As Kudjape is the first mixed municipal waste landfill turned into a recreational area in Europe, it is becoming a real object of interest and a good example for all others.

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Left: Kudjape before (2008)
Top: Kudjape now (2013)

Malmö and other harbour cities aim for smarter energy systems

Text: **Sander Kooistra** Photo**: City of Malmö**

The Swedish port of Malmö plays a pivotal role in the Baltic supply chain for goods and raw materials. Since the City of Malmö is renowned for its 'green' policies, it comes as no surprise that the harbour has also embarked on a drive towards sustainability. In the coming decades, the Northern Harbour of Malmö, governed by the unique international body Copenhagen Malmö Port company (CMP), will be redeveloped.

Per-Arne Nilsson, Head of Urban Development and Climate at the City of Malmö, states: "From our perspective the Northern Harbour is more than just an area for industries and logistics. It is also the ideal spot to secure the long term supply of renewable energy to the city. The harbour activities create business and jobs, but there should also be room for energy production and industrial symbiosis. "

These themes are the core of a European research project that Malmö participates in: e-harbours, where harbour cities from around the North Sea come together in the project. The common goal is to find ways to accommodate more renewable resources in the energy system. Harbour areas house a lot of industries that consume huge quantities of energy. Ports also have the space to install wind turbines and solar panels. The only problem is that these renewable resources are less stable and predictable than gas- or coal fired power plants. E-harbours have been searching for ways to keep power grids with lots of renewables stable.

One solution is to find large consumers that can adapt their usage to the availability of renewable energy – for example by starting the machines only when the wind is blowing hard. Many industrial facilities and installations (and households) can deliver this 'Demand Side Flexibility' that helps stabilize the power system. Even then, some renewable energy will be wasted, when there is too much wind or solar power available. The growth of the electric vehicle fleet gives opportunities to use the car batteries as a storage unit for excess power, although this is still a relatively expensive technique. Participants in e-harbours like Hamburg and Zaanstad (The Netherlands) are now studying the possibilities of 'Power to Heat', where excess power is used to heat water in a district heating system. This district heating system, connecting big production facilities, renewable sources and big consumers of heat (like the hospital), can bring 'industrial ecology' one step further. A promising technology for the City of Malmö, that already has an extensive district heating system.

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The Interreg IVB North Sea Region Programme

Rakvere Smart House Competence Centre – from Smart Houses to Smart City

Text: **Anders Jaadla** Photo: **Rakvere Smart House Competence Centre**

The Municipality of Halmstad asked itself a question: what use do great cycle paths and an excellent public transport have if people do not discover their benefits? The answer was an investment to encourage people to cycle or use public transport instead of taking their car.

Rakvere Smart House Competence Centre is an Estonian regional competence centre that focuses on smart house and intelligent building technologies. With partners from most of the universities of Estonia, regional vocational schools, companies and local authorities the competence centre contributes as a central hub of the industry to support regional development and innovation.

In addition to the focus on intelligent buildings, the competence centre also actively participates in different Smart City initiatives and projects. Andres Jaadla, the Director of Development and Education stresses the importance of a broader view, "As the population in cities increases we face different modern problems that need innovative, green and sustainable solutions."

The new building of the competence centre will be the first public near-zero-energy building in Estonia that utilizes different building automation technologies and has been engineered from start to finish using the BIM methodology. Different sustainable energy sources, like solar panels and geothermal heating pumps will be used for the heating of the building. A unique demo and testing environment that enables to develop and test different building automation systems will be set up inside the centre.

Rakvere Smart House Competence Centre focuses on developing intelligent and smart technologies for the use of home and office equipment, automated building systems and building management. In addition to being a local expertise hub, the competence centre also actively participates in different European sustainable energy initiatives and is advocating energy efficiency through innovative and smart buildings.

The Competence Centre Programme is funded by European Regional Development Fund through Estonian Ministry of the Interior and Enterprise Estonia. Additional funding has been allocated by the City of Rakvere.

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New way of building

Text: **Sara Vergo** Photos: **Lendager Arkitekter**

The municipality of Næstved has an ambition to create the best homes in the world. The homes must be sustainable, super gorgeous, and affordable – situated in a new residential area. The project for this ambition is called "The settlers"

The project differs from other ambitious sustainability projects by the fact that the houses are quite uncommon houses for ordinary people. They are designed by two of the country's most visionary architects regarding sustainable construction - Henning Larsen Architects and Lendager Architects.

When the sustainability ambitions are high it puts great demand on the architects the municipality as an authority. In addition to a rigorous economic framework , the development must meet the criteria in the new German sustainability certification for settlements (DGNB Deutsche Gesellschaft für Bauen Nachhaltiges). This means that the dwelling must meet a number of requirements relating to environmental and energy consumption, as well as social and health requirements. Everything is adapted to first-time buyers on the housing market.

One of the architects, Anders Lendager from Lendager Architects, puts it this way: "Lendager Architects fundamental ambition of the project is to create the world's best buildings, where it is possible to live the dream of a healthy lifestyle, in harmony with nature. We want to show how to build new homes without damaging the environment, we want to demonstrate how to build new homes with recycled materials and create a house that produces more energy than it uses."

In order to integrate this way of thinking in local building and planning, the municipality has chosen to have one of its employees trained as a DGNB auditor.

Choosing the DGNB certification as a framework puts specific demands to the project and on how sustainability can be measured. It also enables the municipality to create the best conditions for sustainability, since the planning of the infrastructure of the area, rainwater management and meeting places for residents are on equal footing with materials and energy classes.

There is great interest among the construction industry regarding "The settlers" -project, and the municipality currently has negotiations with both a non-profit housing company and an investor in the development of this new sustainable residential area.

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Green Data Centre in Växjö – an energy efficient server hall

Text: **Henrik Johansson** Photo**: City of Vaxjö**

The Green Data Center, inaugurated in October 2012, is a cooperation between Wexnet (the broadband city net owned by Växjö Energy), the City of Växjö, the County Council and several companies. The Green Data Center is a very cost efficient and modern solution for server halls, and it is estimated that each project partner has saved 340.000 € by joining the project, compared to if they would have built their own server halls.

The Green Data Center is also a good example on how to take use of energy in an efficient way. Server halls generally need a lot of cooling since the servers generate a lot of surplus heat. In most cases, this is solved by electric cooling machines. However, in Växjö we have established a district cooling grid. Cold water is running through pipelines and contributes to cool down the buildings that are connected to it. The cold water is generated via an absorption process, which actually means that district heating (from biomass) is transformed to district cooling.

The Green Data Center is connected to the district cooling system and uses the returning water that has been used for the cooling of the nearby shopping center. Even if it has already been cooling the shopping center, it is still cold enough to cool down the server halls. When passing the server halls, surplus heat is transferred from the server halls to the water pipelines. The now warmer water in the pipelines can further be used. Since the pipelines run beneath the nearby football field, the warmth makes it possible to extend the football season when the field will not become frosty as early as before. A PV plant that generates 17.000 kWh/year used for pumping the water back to the absorption cooling unit is mounted on the roof of the Greed Data Centre.

Establishing a server hall with the server capacity of 350 kW and a PUE of 1.7 (PUE is the relation between the total energy use in the server hall and the energy use for only the servers), would need 5.212.200 kWh/year. The Green Data Center, used to its maximum and with PUE 1.2 instead, needs 3.679.200 kWh/year. This means that the total maximum reduction of electricity is 1.533.000 kWh, which is a 29 % saving. This would probably be achieved also if the efficiency measures would be carried out in several smaller server halls, but by combining them, it also generated an economic saving for all partners.

The saving of 29 % is the result that is achieved if you still use electric cooling machines. The Green Data Center is however using district cooling instead of electric cooling, which means that an even bigger amount of electricity use is avoided. If we assume that 95 % of all the remaining energy is used for cooling, this equals around 580.000 kWh that are supported by district cooling instead of electricity.

This means that totally, the Green Data Center reduces the need for buying electricity by 2.130.000 kWh, and reduces the total energy use by 1.533.000 kWh.

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Applying Nordic energy efficiency and renewable energy solutions in Kaliningrad Oblast

Text: Eva Hjälmered Photos: Baltic Development Forum

UBC has a good cooperation with the Baltic Development Forum, BDF. BDF acts as the Lead Partner of the RENSOL project "Energy Efficiency and Renewable Energy Solutions in Kaliningrad Oblast", in which the UBC Commission on Energy in the municipality of Oskarshamn is one of the project partners.

The project started with the identification of feasible energy efficient and renewable energy solutions in Nordic countries that could also be adapted to the Kaliningrad region. Possibilities to improve efficient use of energy in housing have been studied by researchers of Lappeenranta University of Technology in co-operation with Environmental Center ECAT-Kaliningrad and Immanuel Kant Baltic Federal University. Findings of our research are now published in the research report "Applying Nordic energy efficiency solutions Kaliningrad Oblast, Russia" both in English and in Russian.

Technically there are proved solutions available that can be used for improvements. Therefore it is important to have a clear plan on renovations that will be done in order to select correct technical solutions for a building. Also, the forthcoming changes (e.g. improved district heat availability) should be demanded from the municipality, as they affect feasibility of different technical solutions.

In a wider scope, the most affecting solutions are not just technical, but also financial and political as they help the implementation of technical energy efficient solutions. Some examples are the use of two-circuit district heating systems when possible and the use of heat pump systems in areas without the district heating availability. Also practical guidance and motivation (e.g. advertisement campaigns) are needed for selection and use of energy efficient alternatives.

Two buildings were studied technically in the report. Renovation proposals were formed for both buildings according to site inspections, heat loss simulations and interviews. In both cases improvement of heating system operation, ventilation and insulation are seen as important factors to improve both housing energy efficiency and quality of living. As the insulation-related façade renovations tend to be costly, easier improvements are related to the improvement of heating system operation with the installation of new radiators with thermostats and for instance the replacement of old windows. Also electricity consumption in buildings can be effectively improved by changing lamps and electrical appliances to energy efficient ones.

Of the studied renewable energy solutions, heat pumps are seen as a feasible solution to buildings having direct electric heating systems. As an example, separate electric water boilers could be replaced with a centralized solution where a sun collector or a heat pump is used to heat the water instead of direct electric heating. However, the feasibility of heat pumps and other technical solutions for improving the building energy efficiency is case-dependent, which requires comparison of different solutions. Also the forthcoming changes in the municipal services should be considered here, as the improvement of district heat availability in municipal area can for instance notably change the feasibility of having a new water heating system in the building. Therefore, long-term renovation planning should also have dialogue with municipal level and their close involvement in the case of public buildings.

XII Union of the Baltic Cities General Conference

Two of RENSOL's main project partners, Nordic Council of Ministers Information office in Kaliningrad and State Autonomous Institution "Environmental Center ECAT-Kaliningrad", took part in the XII Union of the Baltic Cities General Conference that was held on 1-4 October 2013 in Mariehamn. RENSOL was represented at the conference not

only to promote regional cooperation in Russia in the field of energy efficiency and renewable energy solutions, but also to facilitate the creation of long-lasting partnerships based on the triple-helix approach. Involving cross-border, cross-sector and cross-level stakeholders in the Baltic Sea Region as well as exchanging best practice is essential in establishing good dialogue within the region. RENSOL and other international projects have an increasingly important role to play in the future of the Baltic Sea Region. Uniting cities and organizations around the region are a good representation of how cooperation can be beneficial to all stakeholders.

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The UBC Energy Commission is part of the Union of Baltic Cities, for more information please visit: www.ubc.net.

New solution for increased nitrogen removal from wastewater

Text: Uve Fortkamp Photo: City of Oskarshamn

Removal of nitrogen, specifically nitrates, from wastewater is important to prevent eutrophication in receiving waters like the Baltic Sea. In cold climates it is difficult to achieve an efficient nitrogen removal and this is why the Municipality of Oskarshamn is leading an EU-financed project for pre-heating of wastewater.

By pre-heating incoming wastewater to a temperature of about 20°C the biological nitrogen removal is supposed to work more efficiently. The Municipality of Oskarshamn is, together with Emerson Process Management AB and Jayway, testing the technology on a pilot scale at Hammarby Sjöstadsverk in Stockholm, where IVL Swedish Environmental Research Institute is performing the testing and evaluating the technical results.

By using waste heat, for example return heat from district heating, the process is supposed to work in a cold winter climate. At Hammarby Sjöstadsverk, two parallel lines have been built in a demonstration plant, one with pre-treatment and one without, in order to be able to compare pre-heating with conventional treatment. The demonstration indicates promising results:

•Nitrogen removal is increased and can be kept below threshold values and

•Need for aeration is reduced

On the other hand, energy savings from reduced aeration is compensated by energy need for pumping through the heat exchanger. The type of heat exchanger determines the energy efficiency of the process, and thus the energy needed. When using return heat from district heating, the lower return temperature can be useful at the combined heat and power plant. The technology itself is not complicated and can be introduced at existing wastewater treatment plants.

The Municipality of Oskarshamn is the leader for the project, Emerson Process Management AB supplied the control system and know –how, and Jayway has implemented the visualisation on the web.

The project, Itest: Increased Technology and Efficiency in Sewage Treatment, is about to be finalised with a final evaluation of results. More information is available at the project web-site: www.itestlife.eu. The website also contains a simulator, where municipalities can test the effect for their own conditions.

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Recycling Show

Text: **Anna Strömberg and Beata Svensson** Photo: **City of Kristianstad**

Kristianstad Waste Management Company and Agenda 21 are two municipal initiatives working towards the goal of a sustainable environment. This year it is the 120th anniversary of Kristianstad Waste Management Company and the Agenda 21 is celebrating its 20th year of activities in Kristianstad. To mark this occasion, the two partners have jointly developed a children's book The Great Trek, which treats recycling and promotes environmental sustainability.

During this fall, the book will be distributed to all first grade students in the Municipality of Kristianstad. The book can be used as teaching material, but it can also be read as a fiction story. It is not just aiming at being an informative or literary adventure, but it is also encouraging physical activity. The aspiration is that students and teachers are inspired to visit and learn about recycling centers and enjoy the beautiful surroundings of the municipality and of course visit Naturkul i stan! (Fun with nature!) a selection of places around the municipality, picked and developed by Agenda 21 aiming to contribute to increased knowledge about our environment.

This is a way to inform and educate children early in their growth and to spread knowledge while helping to generate interest and questions about the environment and recycling, says Beata Smith, coordinator of Agenda 21

Before the book was distributed, Kristianstad Waste Management Company and Agenda 21 invited all first grade students to a show in Tivoliparken in the city centre. The extraordinary show was called A musical recycling show, and it was the musical garbage collectors Fredrik, Johan, Elin and Henrik who performed it.

We want to teach children in a fun and engaging way on how to and why they should recycle. By starting the habit of recycling at an early age, it is more likely that the good habit will remain, says Anna Strömberg, Communications Officer, Kristianstad Waste Management Company.

The book and the recycling show can hopefully contribute to knowledge and information about recycling and the environment, but also joy, excitement, interest, and maybe reflection on how to contribute to a sustainable environment. It is not only students who can benefit from the book, but also teachers and parents, since it easily explains how to sort and recycle our garbage in the municipality.

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Development of Sustainable Museum in Tukums, Latvia

Text: **Agrita Ozola** Photo: **Shutterstock.com / Aigars Reinholds**

The Durbe Manor in the Latvian town of Tukums was built for over 450 years ago. Today the Manor is known extensively as a monument of architecture from the age of Classicism. The landscape park which surrounds the castle reaches over 24 hectares and is an environmental monument of national importance.

During the mid-20th century, the Durbe Manor was turned into a hospital, which meant that several buildings were rebuilt. During the Soviet era, there were few resources for the preservation of the Manor, and so some of the ancillary buildings, the structures of the park and the surrounding wall of the complex gradually deteriorated.

Since 1991, the buildings of the former Durbe Manor have been the home for the Museum of Tukum. The goal of the museum is to restore the ancient estate and make it available to the public at large. Now the mansion has an exhibition of the 19th century historical interiors. The museum aims at renovating all the buildings and revitalising the historical place to make its rich collections available to the public.

In 2010 co-financing was received from the European Regional Development Fund, the Latvian government and the local government of the Administrative District of Tukum. However, after a bid for tenders it turned out that the intended building could not be erected with the money that was available. A decision had to be made in terms of rejecting the idea of rebuilding the structure or instead trying to do it in a more rational way.

Employees of the Museum of Tukum talked to architects and engineers before deciding to change the museum's philosophy and they supported the decision to develop the idea of a sustainable museum. It is important for all the team to design and erect a building that fits into the historical environment, doing so with locally available and traditional materials and making use of traditional building skills.

In the Museum of Tukum, much attention has been devoted to saving all types of resources and making sure that they are used economically in the search for innovative technological solutions. The structures, materials, layout, design, lighting, heating system and microclimate regulations of the building were all designed with the intention of utilising as little in the way of energy resources as possible during both the construction and the use of the building. The new building will have storage facilities, as well as rooms for conservation efforts, an exhibition hall, a small store, and a zone to provide services to visitors.

The new building will help to restore the historical planning of the estate and at the same time it will allow the Museum to use new opportunities for development. The concept of a sustainable museum will be developed more working together with local residents, teachers, craftspeople and artists as well as engineers, architects, town planners and local politicians to pursue museums mission in a far better way.

The development of the concept of a sustainable museum will improve the storage and care of museum objects in appropriate facilities, also delighting museum employees, who will be able to work in a building that is friendly to them, as well as visitors who will be able to view outstanding artistic and historical treasures while relaxing in a much-improved and historical estate environment. The new concept of the Museum of Tukum is an important issue not only for the museum staff but also for all the inhabitants of the town.

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Support for cities in planning sustainable urban mobility - initiative of the DYN@MO project

Text: **Karolina Marszałkowska** Photo: **Kamil Tomaszevski**

What is an SUMP?

SUMP stands for Sustainable Urban Mobility Plans and it includes planning, defining a process and embracing interrelated measures that aim to satisfy the mobility needs of citizens both today and in the future. The process itself is characterised by a very integrated planning approach, addressing all modes of transport in cities and their surrounding area. SUMPs also include a participatory approach, meaning strong involvement of all the stakeholders and the citizens in the planning process.

Currently, there are many different approaches to sustainable urban mobility planning throughout Europe. While countries such as France and the UK may be considered forerunners, in other parts of Europe – also in some countries in the Baltic Sea Region - Sustainable Urban Mobility Plans are a brand new, or yet unknown, planning tool.

The Baltic Sea Region competence centre on SUMP – initiative of the DYN@MO project

To highlight the relevance of SUMPs and guide European cities in their development, the CIVITAS DYN@MO[1] project, currently being implemented by four dynamically developing European cities, is to establish an SUMP competence centre for the Baltic Sea Region.

What does the Baltic Sea region competence centre on SUMP do and who is it for?

The aim of the competence centre is to assist cities in the Baltic Sea Region in developing their SUMPs, by giving information, support, exchange of knowledge and experience as well as training on the process itself.

The Baltic Sea Region competence centre on SUMP will be led by the University of Gdansk, where the physical contact point for the centre also will be. The work will be supported by the UBC Commission on Environment and Commission on Transportation, as well as the City of Gdynia. In addition, an online platform is being developed to gather knowledge and good examples of SUMPs from the Baltic Sea Region.

The main communication channel will be the online platform: http://www.bsr-sump.eu, currently being developed and published in February 2014.

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[1] The project is co-financed from the 7th Framework Programme and realised within the CIVITAS Initiative, by such European cities as: Aachen (Germany), Gdynia (Poland), Koprivnica (Croatia) and Palma de Mallorca (Spain).

CH4LLENGE supports cities in sustainable urban mobility planning

Text and photo: **Maija Rusanen**

A new project CH4LLENGE (2013-2016), addressing the key challenges of sustainable urban mobility planning, has started at the UBC Commission on Environment.

Urban transport is a major consumer of energy and emitter of greenhouse gases, and cities of different sizes have thus a crucial role in contributing to EU 2020 targets of improving the energy efficiency and cutting down greenhouse gas emissions. Achieving these goals can ensure the attractiveness of our cities as places worth living, today and tomorrow.

In order to meet these targets, cities need to adopt a more integrated approach to sustainable mobility planning and policy making. There is a wide consensus that sustainable urban mobility planning contributes to a better quality of life and that it is a more strategic way of tackling transport-related problems in cities. However, cities frequently face major barriers while creating their own Sustainable Urban Mobility Plans (SUMPs).

In CH4LLENGE, nine European cities and eight supporting organisations have teamed up to tackle the four most pressing challenges in sustainable urban mobility planning:

- *Stakeholder participation and citizen involvement*
- *Institutional cooperation between sectors and disciplines*
- *Identification of the most effective policy measures*
- *Monitoring and evaluation of progress in SUMP development*

The project cities, supported by a group of SUMP experts, will develop strategies and implement pilots in these four thematic areas.

Seven UBC cities are involved in CH4LLENGE

CH4LLENGE also supports 26 Follower Cities from outside the consortium which are committed to improving their mobility planning. Among them are UBC cities Tartu from Estonia, Kotka and Turku from Finland, Riga from Latvia, Kaunas from Lithuania, Gdynia from Poland and Kalmar from Sweden. UBC Commission on Environment coordinates the communication and dissemination activities in CH4LLENGE.

Based on the lessons learnt and results of the project, four CH4LLENGE Kits including brochures, manuals, and e-learning courses will be developed as the main output of the project. In addition, CH4LLENGE offers a great variety of training activities including SUMP training workshops, national seminars and summer school courses open to all interested cities.

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CH4LLENGE

Co-funded by the Intelligent Energy Europe Programme of the European Union

STeR project in Gdańsk, Poland

Text and Photo: **Jarosław Wincek**

Although Gdansk is seen as one of the most cycling friendly cities in Poland, efforts for making it even better has been made. The most comprehensive action aiming at creating a cycling policy for Gdansk is called STeR, initiated in 2011. The acronym STeR stands for the Polish name "System Tras Rowerowych dla Gdanska" which means "Cycling routes system for Gdansk", as one of its main goals was to plan missing cycling routes in Gdansk. However, the concern does not only regard facilities for cyclists but also quality public spaces, as it is widely known that the best cycling cities are usually the most livable ones.

In May 2011 nineteen workshops for developing the plan took place. Anyone interested in improving cycling conditions in Gdansk had the possibility to talk with urban planners and traffic engineers in the city region and draw missing cycle paths or point places that needed to be improved on a map. The workshops resulted in sketched maps and a list of 640 suggestions for future development.

All of the suggestions were analyzed by urban planners and traffic engineers from Biuro Rozwoju Gdanska (Gdansk Development Agency) in cooperation with the city cycling officer and the city traffic management. The final product of this phase of the project was the STeR guideline book.

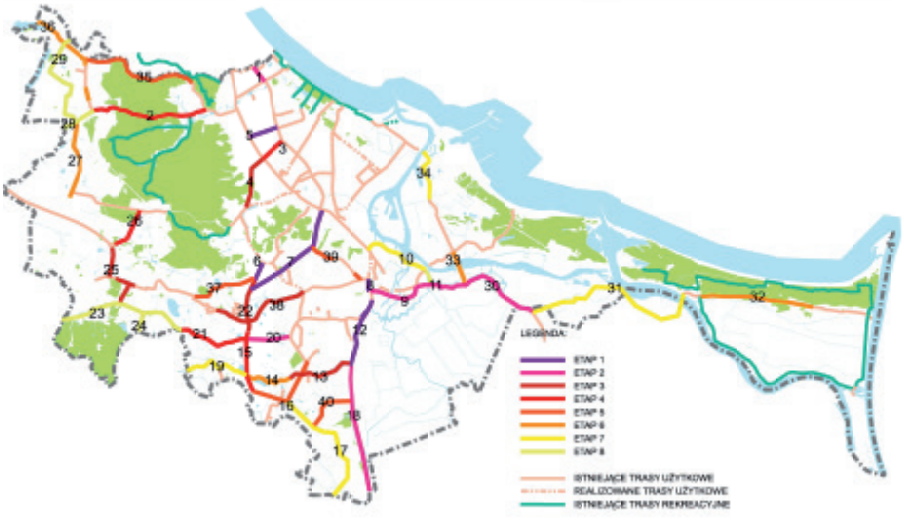
The net of complete cycling system in Gdansk was planned and three classes of routes, that have to reach certain technical standards, in accordance to their importance in the system were introduced. Main routes covering 164 km within city borders, 152 km of "gathering" routes and local or recreational ones, together around 420 km were planned.

The STeR guideline also focused on "tempo 30" zones. The map includes areas where motorized traffic should be slowed down to create better conditions for cyclists and pedestrians as well as to enhance the quality of public space. Cycle parking places were also tackled. Standards of minimal capacity of cycle parking in new buildings, depending on their volume and function, were introduced together with several locations of parking space that were needed to effectively combine cycling with public transport.

Additionally, the STeR guideline includes methodology in choosing the appropriate cycling facility along the street. On streets where the maximum allowed speed does not exceed 30 km/h there should be no extra infrastructure dedicated for bicycles and cycle and car traffic should be mixed. Where the maximum traffic speed is between 30 and 50 km/h cycle lanes on both sides of the road are needed. Separate cycle paths are the right facility when maximum speed on the street exceeds 50 km/h.

The second phase of the STeR project is the strategy of realization of the system, started in 2012. The main target is to propose the optimal sequence of building the cycle links and other facilities planned. To achieve the goals, forty main cycling routes were chosen for the total length of almost 110 km cycling paths. Other facilities needed in the area were located and listed: needed parking places and crossings with "gather" and local routes or streets to introduce "tempo 30"-zone. For each of the forty routes, technical drafts and several analyses were made in order to make it possible to asses building costs, forecast the number of users and analyze the impact on environment.

All these and other aspect were taken into consideration and priced within the multi-criteria analyze. In result, each route got the certain amount of points that directly decides on the priority of its building. The realization of the whole system was divided into eight stages plus a "stage zero" dedicated to ridding of barriers and obstacles on existing routes.



The STeR project is meant to indicate most important cycle-connected projects to undertake within EU 2014-2020 funds.

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Mobile air-conditioning in cars and buses - Cool but ecologically harmful

Text: **Patrick Huth and Hannah von Blumröder** Photo**: Shutterstock.com / Vipavlenkoff**

Nowadays, more than 95 percent of new cars and more and more buses are equipped with mobile air-conditioning (MAC) systems – and these figures count as well for countries in moderate climate zones like Germany. An air-conditioning system offers comfort and can enhance driving safety, especially in the summer. But on the downside, today's MAC systems not only use almost exclusively a climate damaging refrigerant but can also contribute substantially to a vehicle's overall fuel consumption.

"Depending on the ambient conditions and the technology, the use of an air-conditioning system may increase fuel consumption of a car or a bus by 10 to 25 percent", says Hannah von Blumröder, who is working for the German environmental organization DUH. As a result, especially transportation companies and fleet operators have to face high costs for operation and maintenance of air-conditioned vehicles.

Furthermore, the still mainly used refrigerant called R134a is a fluorinated gas (f-gas) which is 1.430 times more climate-damaging than CO_2. Vehicles release large amounts of R134a as a result of inadequate maintenance or even during normal operation. For example, the yearly refrigerant emissions of cars in Germany are as high as the CO_2 emissions of 2 million passenger cars with average mileage.

What's the alternative?

"Usually known as a climate damaging greenhouse gas, CO_2 can be used as an environmentally friendly and cost-effective refrigerant in cars and buses", says Patrick Huth, Project manager of DUH. Air conditioning with the natural refrigerant CO_2 can reduce energy consumption and maintenance costs for car owners and bus operators significantly. Compared to other alternatives, it is non-flammable and easily deposable. Besides, the cooling process of MAC systems with CO_2 can be reversed: By this, it is possible to use the system as a very efficient heating.

To address this issue, Deutsche Umwelthilfe e.V. (DUH, German Environment Aid Association) and its partner Verkehrsclub Deutschland e.V. (German Traffic Association) run the LIFE+-campaign PRO KLIMA to press ahead with the use of natural refrigerants and the efficiency of MAC systems.

This means that totally, the Green Data Center reduces the need for buying electricity by 2.130.000 kWh, and reduces the total energy use by 1.533.000 kWh.

More information:
More information and a short film is available at: http://www.autoklimaanlage.info/en/start.html

Ensure your participation in the Maritime Triple Helix Database!

Text: **Terhi Luukkainen**

SmartComp project aims to improve the growth, competitiveness and networking of the Central Baltic maritime clusters. One of the project's outcomes is the Maritime Triple Helix Database that has just been published.

The triple helix contact database acts as a concrete tool to search for possible business partners, cooperation networks, information, publications or projects and much more, all related to the Central Baltic maritime sector. The database includes Central Baltic maritime cluster companies, public and third sector actors, universities and research institutions, projects and related publications. The database aims to serve as a supporting element to increase triple helix cooperation between the maritime clusters of Estonia, Finland and Latvia.

The database helps in finding business partners

The companies in the database have been categorized by business field and location to help visitors find what they are searching for. The business fields have been categorized under three main topics: Maritime Industry, Shipping and Port Operations. The search can be narrowed down by selecting companies from a specific country: Estonia, Finland or Latvia or from a specific town just by writing the name of the town in the search field. When the user clicks the company name, he will be shown further information of the company's location and a link to the company's homepage.

The list of public and third sector actors in the database includes local and regional authorities, national authorities and trade and industry associations that affect the maritime sector and its operational environment. The included research and educational institutions and projects function in developing, teaching and studying maritime related issues. The database will also collect all relevant publications under the same address.

UBC EnvCom is the home of the database

The companies in the database are based on an acquired list of all Central Baltic companies which have registered the maritime sector as their field of activity. Companies have also been searched manually. Information on the public and third sector actors, universities and research institutions, projects and publications relating to the maritime sector has been gathered by the SmartComp project partners.

The responsible partners of the database are the Centrum Balticum Foundation and UBC Commission on Environment. As the project has been concluded in the end of 2013, the UBC EnvCom will continue updating the database.

Visit the Maritime Triple Helix Database:
http://thdb.cb-smartcomp.eu/

If your company, organisation, project or publication is missing from the database, please contact us. You are more than welcome to join!

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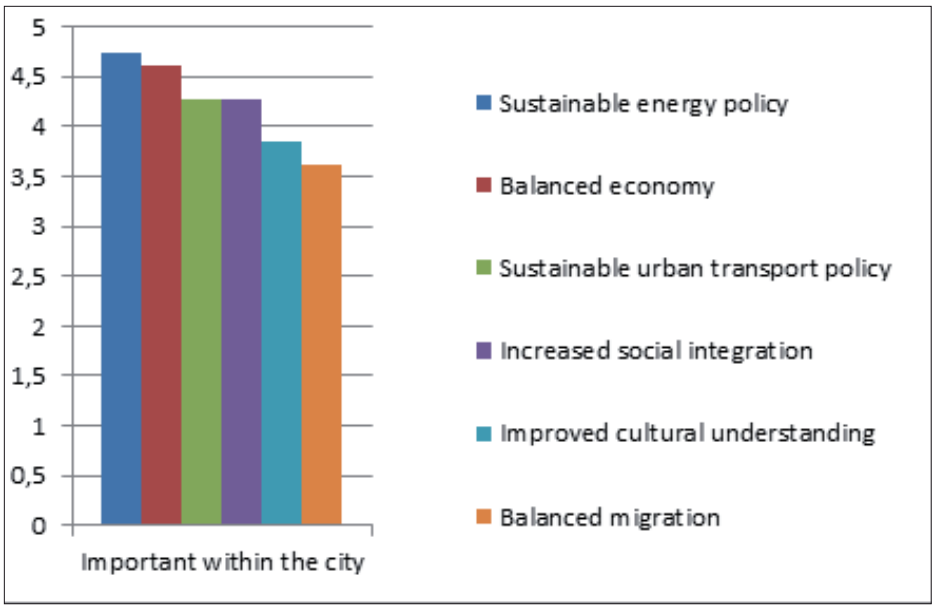
UBC Sustainability Survey reveals general trends and needs of the member cities

Text: **Olena Zinchuk** Photo: **Anita Zakse**

How sustainable are the UBC member cities? What goals have been reached in the past years? Has the UBC Sustainability Action Programme been really set in motion ?In order to evaluate the current state of sustainability affairs in all UBC member cities and to answer the questions above, the UBC Commission on Environment carried out the Sustainability Survey 2013.

The response rate of the Sustainability Survey 2013 was somewhat lower than of those from previous years. Nevertheless, UBC member cities that gave their responses for the survey represented the network proportionally with slightly more prevailing share of the North Baltic municipalities. This is a persistent trait, present also during previous evaluations. Therefore, the received survey responses provide a tangible input regarding general trends and needs as well as the most recent information on specific topics in the member cities.



For example, the clear majority of the respondents claimed that the cities they represent take part in Baltic Sea Region related and EU related sustainability policy work, such as participation in signing agreements like the Covenant of Mayors, implementing the EU Strategy for the Baltic Sea Region through various joint sustainability development projects, and also in different social campaigns and events ("earth hour", "car free day", etc.).

Also, the survey replies have shown the slowly growing trend among the UBC member cities to utilize the model of integrated management for sustainability (IMS), sustainability indicators and monitoring practices in their strategic planning and implementation. 88% of respondents stated that their cities prepare local sustainability programs and action plans (compared to 86% in 2009); 65% use sustainability management systems in strategic city leadership (compared to 40% in 2009).

74% of the respondents mostly representing North Baltic cities stated that their municipalities have a clear CO2 reduction plan to meet the EU 2020 target. Slightly over the half of the answers confirmed that the cities are able to increase the share of renewable energy with 20% by 2015 from the level of 2009. These results are very promising as the sustainable energy policy of the cities goes well in line with the goals and targets set out by the EU strategic documents.

Lastly, the survey ranked the importance of future trends and challenges in the Baltic Sea Region and prioritized cities cooperation interest within UBC network. The outcomes of this evaluation have shown that both regionally, and within the respondents' local municipalities, most important subjects were balanced economy, sustainable regional energy and transport policies and environmental state of the Baltic Sea. Slightly less priority received social issues such as increased social integration, improved cultural understanding and balanced and sustainable migration.

Figure1 illustrates average rate of importance of the certain subjects for the cities in the near future (1 – subject not important al all, 5 – very important).

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Slovenian municipalities looking for international cooperation

Text: **Mikko Jokinen** Photo: **Shutterstock.com / photo79**

In early July last year some Slovenian municipalities invited representatives from other municipalities of other EU countries to visit Slovenia for learning about local circumstances and study possibilities to create partnerships in future European projects. Two UBC cities, Pärnu and Turku were participating to this gathering, which was financed by the Europe for Citizens programme. Other participating representatives, a part from the UBC cities, came from the cities Foscani and Pecica from Romania, Budva from Montenegro and Oeiras from Portugal.

Slovenia is one of the smallest EU countries (2 million residents) and it became a member of the EU in 2004 and a member of eurozone in 2007.

Slovenia has some 200 municipalities, mostly small ones, and many of them have been quite successful in utilizing European structural funds especially for improving their infrastructure. These funds are applied directly from Slovenian national authorities without any international partners and this is one of the reasons why municipal experiences of international cooperation are still quite limited in Slovenia.

Bigger cities, like Ljubljana and Maribor (EU cultural capital 2012) have been active in European context and Ljubljana University is partner in one of the latest big UBC project on energy efficiency (PLEEC), which has just started.

The visiting study group visited three municipalities, Sevnica, Kidricevo and Radenci, and met representatives from other three municipalities. The municipalities were all relative small, Radenci being the biggest with 18 000 inhabitants, having quite few people in the administration and even fewer able to communicate in English. Despite this, everyone was well prepared for the meeting and eager to create a connection with foreign municipalities. Interests are varying from tourism and cultural cooperation to specific topics like looking innovative ways to utilize old military bases for current development.

Slovenia is an active, peaceful and beautiful country with is easily accessible and if any Baltic city is interested to create contacts with Slovenian municipalities, the Local contact point for Europe for Citizens helps with the connections at info@ezd.si .

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Short News

Does your city need support in sustainable mobility planning?

QUEST project has developed a Quality Management Tool to help cities to set up and further develop their sustainable mobility policies and action with the assistance of an external expert - the QUEST Auditor.

The QUEST tool has been designed especially for small and medium-sized cities and it guides cities to translate sustainable mobility policy into actual modal shift. QUEST is suitable for any city, no matter what the level of development in the city's sustainable urban mobility planning is or whether it has a well-developed mobility plan. Cities going through the QUEST process receive a tailor made Action Plan with recommendations for both short- and long-term measures for sustainable transport.

The QUEST tool has been already tested and applied in 46 cities from 14 countries and the integration of an external expert (auditor) has proven as the key to success. Currently, the methodology is available in 7 Baltic Sea Region countries: Denmark, Finland, Germany, Lithuania, Poland, Portugal and Sweden.

Visit www.quest-project.eu.

The Gulf of Finland exhibition

The year 2014 will be celebrated as the Gulf of Finland Year. The year is coordinated by the Finnish Environment Center and is trilateral between Finland, Russia and Estonia. The Finnish Ministry of Environment is financing an exhibition, which is created by UBC EnvCom together with Estonian and Russian partners.

The main target of the exhibition is to increase the knowledge of the public on the uniqueness and importance of our common sea, to tell about the protection measures already taken and to give means to citizens to influence the protection of the sea with their own actions. The exhibition is also a great framework for emphasizing the common cultural heritage of the three countries.

The exhibition will be launched in the beginning of June 2014, and copies of it will be circulating simultaneously in Finland, Russia and Estonia. The exhibition places consist of e.g. nature centers, harbours and seasonal local events. Also a web version of the exhibition will be created to ensure reaching as wide audience as possible.

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I ♥ GULF OF FINLAND 2014

Short News

Saving the Baltic Sea by Investing in the Waste Water Management in Belarus

Public Forum of PRESTO Final Conference entitled “Save the Sea – Investing in Waste Water Manage-ment in Belarus” took place in Helsinki on 11th of February 2014. The event has gathered around 90 participants representing waste water treatment utilities, universities and research institutes, engineering and technology consultancy companies, as well as local, national and EU officials and representatives of the international organizations (UBC, HELCOM), water associations (European - EWA, German - DWA, Belarussian - Aqua-Bel and Finnish Water Forum) and financial institutions (NIB, NDEP/EBRD, NEFCO).

Topics discussed during the conference concentrated on the benefits and challenges of implementing the transnational investments in Belarus, presented practical examples of co-operation aiming at reducing the nutrient load in the Baltic Sea Region, and tried to look into the future of European water management sector.

The overall objective of the event was to summarize the achievements of the project, disseminate its outcomes and share the knowledge developed throughout over the two years of its duration. PRESTO kicked off in November 2011, and since then the project activities have resulted in the phosphorous re-moval investments at three Belorus-sian WTTPs in Grodno, Molodechno and Vitebsk; laboratory, meas-urement and other analyzing equipment at the Baltic WTTPs Daugavpils and Kaunas; and capacity building coop-eration between the Technical University of Berlin and three universities that prepare water management specialists in Belarus.

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UBC ENVIRONMENT AND SUSTAINABLE DEVELOPMENT SECRETARIAT

Union of the Baltic Cities (UBC) is a network of 107 cities from all ten Baltic Sea countries, with an overriding goal of contributing to the democratic, social, cultural and environmentally sustainable development in the Baltic Sea Region. UBC Commission on Environment (UBC EnvCom) is one of the 13 commissions of the UBC.

Practical work of the Commission is carried out by UBC Environment and Sustainable Development Secretariat. Its services for the cities include for example organising meetings and policy work, preparing documents and publications, initiating and running projects, and consulting and training. The Secretariat carries out Baltic Cities Sustainable Development Surveys biannually, publishes Baltic Cities Environmental bulletin, and offers Good Practice Database for local authorities at www.ubcwheel.eu.

The current staff of Environment and Sustainable Development Secretariat consists of 13 professionals working fulltime for the UBC.

EnvCom, Turku

Our aims

UBCWheel

UBC Good Practice Database (UBC Wheel) is a database full of practices that cover sustainable development in Baltic Sea cities including all topics from transport to health and from social aspects to economic instruments; all dimensions of the Aalborg Commitments. At the moment, there are 500 cases inserted in the database.

www.ubcwheel.eu

Projects

PRESTO - PURE - CHAMP - CIVITAS DYNAMO - BaltCICA - Eltis+ - QUEST - NETCOM - SMARTCOMP... just to mention a few.

Contact us

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THE GULF OF FINLAND YEAR 2014 –exhibition

The Gulf of Finland Year 2014 brings together experts, decision-makers and citizens from Finland, Estonia and Russia to work together for the creation of healthier and safer gulf. Extensive collaboration between the three countries is crucial to ensure the sustainable use of the Gulf of Finland. More information at www.gof2014.fi/en/

As a part of the Gulf of Finland year you have the possibility to book the Gulf of Finland –exhibition to your premises or events in Finland, Russia and Estonia.

The exhibition is directed to visitors of all age groups and it consists of different modules, which include common knowledge about the drainage area of the Gulf and the protection achievements. There is also more detailed information about the marine research and the uniqueness and vulnerability of the area. The exhibition has been financed by the Finnish Ministry of Environment and implemented as trilateral cooperation between Finland, Russia and Estonia.

- The exhibition consists of eight different modules, which can be used individually or all together depending on the space available.
- In the three countries, there are several exhibition sets.
- Suitable places for the exhibition are nature centers, libraries, lobbies etc. Some parts are also suitable for outdoor use.
- The minimum space required is 20 square meters.
- The exhibition can be erected by one person, but it is faster if there are two persons doing this.
- With the exhibition you will receive instructions on how to use and assemble it. The only module that requires electricity is music.
- The exhibition is available for show from May onwards. It has a complementing web version.
- The length of the reservation can last from a few days to several weeks depending on the event or the space.
- It is available for rent without fee on the condition that access does not require any admission fee.
- The person, who makes the reservation, is also responsible of the condition of the exhibition and delivering it to the next location.

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